

Oklahoma Conservation Partnership Report

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VISION: Productive Lands Healthy Environment -- MISSION: Helping People Help the Land

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STEVE ALSPACH NAMED OKLAHOMA NRCS STATE SOIL SCIENTIST

Steve Alspach has been named Oklahoma's State Soil Scientist. Gary O'Neill, Oklahoma State Conservationist, announced the appointment on April 8, 2014. He said, "Steve is uniquely qualified to serve as our State Soil Scientist. He is a career employee who has served NRCS in several positions in two states and we are pleased to have him as a member of our State Leadership Team."

Alspach is a native of Nowata, Oklahoma and has served NRCS for 22 years, including 7 years as a member of the Soil Survey Team in Buffalo, Oklahoma, 10 years as a Resource Soil Scientist in Emporia, Kansas, Clinton and Perry, Oklahoma. He has also served two years as the MLRA project leader in Stillwater and has been the Oklahoma Assistant State Soil Scientist for three years. Prior to starting to work for NRCS (then SCS) in 1992, he worked four summers as an Engineering Aide for the Agricultural Research Service (ARS) Hydraulics Lab.



Steve is a graduate of Oklahoma State University with a BS in Agronomy, has 2 daughters, is a member of the Professional Soil Scientists Society of Oklahoma. Prior to becoming State Soil Scientist, he used to enjoy hunting, fishing, and golfing, but will probably not have time for that in the foreseeable future!

Steve Alspach, Oklahoma State Soil Scientist

Engineering Review

On March 27, 2014, two representatives from RDO Integrated Controls, Yon Egusquiza and Nikolas Smilovsky, visited the USDA-NRCS State Office in Stillwater, OK. They demonstrated the functionality of the eBee senseFly Unmanned Aerial Vehicle (UAV), commonly known as a drone. The eBee has a flight time of up to 45 minutes, allowing it to cover areas of up to 4 square miles in a single flight. With its 16 MP camera it can shoot aerial imagery down to 3cm/pixel resolution. The images can then be used to create maps and elevation models with a precision of 5cm.

The eBee has the potential to reduce field survey time by mapping a field's topography. Post flight software allows users to associate each image with its position and orientation to create geo-tagged images from the eBee to obtain global orthomosaics and Digital Elevation Models (DEM), which can be used in planning and potentially to design conservation practices.

The eBee is supplied with a conventional digital camera and a Near Infrared (NIR) camera. This makes it capable of taking two types of images: True Color (RGB), which is typical of what one sees from overhead with the naked eye, and False Color Infrared (FCIR), which are used to analyze and distinguish differences between plant health variability and soil moisture. This capability has the potential to assist in monitoring conservation easements, Highly Erodible Land (HEL) compliance, brush and invasive species inventories, etc.

Additionally, third party software allows users to calculate Normalized Difference Vegetative Index (NDVI) from these images, which are a calculated vegetative index which shows growers or crop consultants the variability in plant biomass density and plant health across the field. It picks up subtle differences between plants, soil and water, and allows the operator to more easily define field variability.

No piloting skills are required. The eBee takes off, flies and lands autonomously from a preloaded flight plan. The artificial intelligence incorporated in the eBee autopilot continuously analyzes data from the Inertial Measurement Unit and the onboard GPS and takes care of all aspects of the flight mission. When fully loaded and ready to fly, the UAV weighs less than 2 pounds and can fly in 30 miles per hour winds.

The eBee is sold with 2 cameras, replacement batteries and parts, chargers, tablet computer, software, and 3-5 days of training for around \$32,000. To view a video of the eBee in action follow this URL: <http://www.youtube.com/user/senseFly>



eBee senseFly UAV or “drone”



Nickolas Smilovsky assembling the eBee senseFly UAV for a demonstration

Engineering Review cont....

Oklahoma NRCS Assists Colorado in Flood Recovery

Three Oklahoma NRCS employees traveled to Colorado January – March, 2014 to assist in recovery efforts from the September 2013 flood event. The EWP detail for Michael Goforth, CET, was for 6 weeks while the details for Brian Dillard, Project Engineer, and Russell Miller, Construction Inspector, were each for 7 weeks.

The Oklahoma crew primarily worked in Larimer and Boulder Counties; with most of the work being in and around the small community of Glen Haven (approx. 7 miles north of Estes Park, CO). The majority of the community was destroyed in the flood. Almost everyone in this community was directly impacted by this flood.

Some interesting statistics about the flood:

Numerous areas received close to an average years' worth of rain in just a few days, with some areas receiving up to 18 inches.

As an example of the magnitude of the flooding. The North Fork of the Big Thompson River upstream of Drake, CO peaked at about 18,000 cfs, with a depth of 17 feet. In comparison, a normal annual peak flow on this stream is about 300 cfs, with a depth of about 2.5 feet.

The primary purpose of the EWP efforts was to protect existing structures that were at risk of receiving additional damage during the spring 2014 snow melt runoff. Michael and Russell provided detailed surveys for the design staff, often in inclement weather and heavy snow. Brian worked on streambank stabilization designs with the purpose of preventing further erosion.

The damage to the houses shown below was a very common sight to be seen after the flood event.



Russell Miller, Michael Goforth, & Brian Dillard-Standing in front of a damaged house along the Big Thompson River



A home washed downstream on West Creek. These homeowners lost their home and their business in Glen Haven

Outreach Review

The Natural Resources Conservation Service (NRCS) participated at the Oklahoma Black Historical Research Projects 8th Annual Economic Development Conference. The theme of this year's conference was "Economic Strategies for Limited Resource, Native American and Socially Disadvantaged Farmers". The conference was held at the Langston University, Oklahoma City Campus, on March 21st and 22nd, 2014. NRCS participated in three training sessions, *Benefits of USDA Programs*, *Understanding USDA Programs* and *NRCS Program Application Process*. State Conservationist, Gary O Neill and State Tribal Liaison, Dr. Carol Crouch, participated in the delivery of the NRCS sessions. Dr. Crouch provided the training on *NRCS Program Application Process* and was moderator for the conference. Mr. Leonard Jordon, Associate Director for Conservation, for NRCS, was keynote speaker on March 22nd.



The *Understanding USDA Programs* panel members. USDA agencies representatives included NRCS, Farm Service Agency (FSA) and Rural Development (RD)

NRCS, FSA and RD Partner to Hold Tribal Consultation Meeting

The Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA) and Rural Development (RD) partnered to hold a tribal consultation meeting with the Otoe Missouri Tribe on March 13th. The consultation meeting was held at the Otoe Missouri Tribal complex in Red Rock, Oklahoma. Representing the Tribe were three tribal leaders and directors from eight of the tribal departments. Representing NRCS were; State Conservationist, Gary O Neill, State Tribal Liaison, Carol Crouch and District Conservationist, Rusty Peterson. State Director, Francie Tolle, represented FSA and State Director, Ryan McMullen, represented RD. USDA representatives provided attendees with valuable information on Farm Bill programs and community based funding opportunities. The focus of the meeting was to consult with the Tribe to identify their conservation needs, issues, barriers or concerns; then determine if the USDA agencies could provide assistance.



Representatives from the Tribe included tribal leaders and directors



Front Table: USDA leaders, Gary O Neill, Francie Tolle and Ryan McMullen

Zone 1 Review

ALFALFA COUNTY – Cherokee Field Service Center

The Alfalfa County Extension office, the Alfalfa County Conservation District and the NRCS Cherokee field office hosted Forage – Reclamation Drilling Mud workshop on March 13, 2014 in Cherokee. Forage management considering drought, grazing and compaction was covered by Dr. Daren Redfearn, OSU Forage/Pasture Specialist. Brandon Reavis, NRCS State Rangeland Management Specialist, went over vegetating disturbed sites, specifically pipeline construction areas. Dr. Chad Penn, OSU Plant and Soils Sciences discussed drilling mud and forage relations. Tommy Puffinbarger, Alfalfa County Extension, spoke about drilling mud application concerns. Over 20 producers attended the meeting.



NOBLE COUNTY – Perry Field Service Center

Noble County Conservation District, OSU Extension and NRCS hosted an outreach meeting pertaining to Feral Swine. There were 36 in attendance. Joshua Gaskamp from the Noble Foundation talked about trapping techniques. Randy Lowery discussed USDA Wildlife Services role in the problem and Justin Roach, DVM, discussed potential implication to livestock and humans. The take home lessons are trap them and give all of them a high speed lead injection so they take a long nap.



Zone 1 Review cont...

TEXAS COUNTY – Guymon Field Service Center

The Guymon Field Office and the Texas County Conservation District hosted a booth at Ag Appreciation Day on February 22, 2014. Alan Messenger, DC, and Clancy Green, District Secretary staffed the booth and provided information to attendees on district and NRCS programs and services. Attendees were able to visit an assortment of vendor booths and heard from a wide range of speakers, including Oklahoma Secretary of Agriculture Jim Reese. Secretary Reese also presented the district's 2013 Outstanding Cooperator Award during the Ag Day luncheon.



Ag Day Booth Set-up



Jimmie Draper (left) 2013 Outstanding Cooperator Award Recipient and OK Secretary of Ag, Jim Reese (right)

WOODS COUNTY – Alva Field Service Center

On March 10, 2014 the Alva NRCS assisted the Cimarron Range Preservation Burn Assoc. in Woods County. The group met at Greenleaf Fire Dept. and approximately 35 landowners were in attendance. Guest speakers for the evening were John Weir, OSU Fire, Ecology Research Assoc., Jeff Moen, Legal Affairs Consultant with the Noble Foundation and Russell Stevens, Wildlife and Fisheries Consultant with the Noble Foundation.



Zone 2 Review

CRAIG COUNTY – Vinita Field Service Center

LOCAL WORKGROUP MEETING April 22, 2014

The meeting was called to order at 9:00am by Erik N. Friend, Vinita NRCS district conservationist; those present were Kevin Long, OSU extension agent; Bob Willy, Dale Tullis, Larry Cordray and Stanley Deewall, Craig County Conservation District board directors and Jo Callison district secretary.

The Craig County priority resource concerns that were discussed included soil erosion on cropland, streambanks and pastureland; pest management involving musk thistle, *Sericea lespedeza*, and eastern red cedar. The Environmental Quality Incentives Program ranking criteria worksheets were the next topic of discussion. It was the consensus of the group that the Craig County Grazinglands Resource Concerns ranking criteria would remain the same. The group discussed educational opportunities and outreach. A breakfast outreach meeting that includes local government leaders was proposed. Including tribal leaders was proposed by Mr. Friend. The chairman will contact the leaders to set a date.

Program information including EWP, WHIP, EQIP, CRP, GRP, CTA and the state cost-share program was provided by the District Conservationist.

The group prioritized the resource concerns for their county as follows;

- Soil erosion on cropland with an emphasis on conversion to permanent vegetation
- Grazing land management to control invasive plant species and eastern red cedar
- Improvements for grazing land including watering facilities and ponds.
- Education/Outreach



DELAWARE COUNTY – Jay Field Service Center

An informational Specialty Crops Workshop was held at the Leach First Baptist Church in Rose Oklahoma on March 19th from 9:00AM to 3:30PM. The meeting was open to the public, but was arranged for by the Hmong Growers Association in Delaware County. The growers association is pursuing and has contracted with a supermarket chain to provide naturally grown fresh produce. This meeting provided information and training on food safety practices for picking, handling, processing, packing and shipping of produce to help protect consumers and to document safe handling of products. This was presented by Dr. Lynn Brandenberger, Dr. William McGlynn and Jason Young, all of OSU Cooperative Extension Service. Michael Ramming, District Conservationist in Delaware County, presented farm bill information on opportunities to apply for programs such as CSP and discussed EQIP in depth with emphasis on the Organic and Seasonal High Tunnel initiatives. Other presentations were made by USDA Risk Management and the Oklahoma Department of Agriculture. Over 30 people were in attendance.



Specialty Crops Workshop

Zone 2 Review cont....

NOWATA COUNTY – Nowata Field Service Center

The Nowata Field office and the Nowata County Conservation District held the annual Conservation Poster and Essay contest. The poster contest was conducted for grades K- 5th and the essay contest is held for grades 6th- 8th. District Conservationist, Julie Lamb went and spoke to the 2nd and 3rd grade students about the importance of water quality and what exactly is a watershed. She also spoke to 7th and 8th grade students on the same topic. This year we had over 300 posters and 15 essays entered.

The Nowata Field Office and the Nowata County Conservation District held it's annual speech contest covering the topic of Where Does Your Watershed. The speech contest is held for grades 9th - 12th. This year we had a turn out of 6 participants.

The Nowata Field Office and Nowata County Conservation District held its annual Land and Pasture Judging contest. This event covers 3 different contest for 4-H and FFA students. We had 20 Land Judging participants, 24 Pasture and Range participants and 4 Land Surveying participants.

The Nowata Field office partnered with the Nowata and Caney Valley Conservation District as well as the Dewey Field office to put up a large display at the Bartlesville Public Library. This years theme covered Soil Health and services offered. The display will be available to the public the month of April. During this time there will be at least 5,000 people that will see this display as they enter the library.

MUSKOGEE COUNTY – Muskogee Field Service Center

The Natural Resources Conservation Service (NRCS), the Oklahoma Tribal Conservation Advisory Council (OTCAC) and the Muskogee County Conservation District partnered to hold a free conservation workshop and luncheon on Tuesday, April 22, 2014. The workshop was held at the Frank Gladd American Legion, in Fort Gibson, Oklahoma. Local farmers, ranchers, Tribes, tribal members and women in agriculture attended the workshop. Representatives from the USDA NRCS, Farm Service Agency (FSA), Rural Development (RD), Risk Management Agency (RMA), National Agricultural Statistics Service (NASS), OSU Extension and the Muskogee County Conservation District made presentations that attendees with valuable information regarding the importance of soil health, benefits of no-till, how to get a good soil test, wildlife management and funding opportunities through USDA programs. The welcome was provided by NRCS State Conservationist, Gary O'Neill, Director of the Office of Tribal Relations, Office of Secretary USDA, Ms. Leslie Wheelock and Deputy Under Secretary, Rural Development USDA, Doug O'Brien, J.D., LL.M.



NRCS, State Soil Scientist, Steve Alspach, conducted soil health demonstration using the rainfall simulator to illustrate the importance of soil health.



Local producers, Tribes and tribal members received valuable information on funding opportunities through USDA programs

Zone 3 Review

BECKHAM COUNTY – Sayre Field Service Center

The Sayre Field Service Center and North Fork Red River Conservation District partnered in outreach effort April 5 and 6. Field office personnel set up an exhibit at the Southwest Oklahoma Farm and Home Expo. This year marked the 30th anniversary that the Expo has been held in Elk City. A Soil Health Floor Display from the NRCS Distribution Center was utilized to convey the importance of soil. The two day event was well attended and provided an excellent opportunity to communicate the partnership mission and showcase the services available to local private landowners through the Field Service Center.



Southwest Oklahoma
Farm and Home Expo

ROGER MILLS COUNTY– Cheyenne Field Service Center

Soil Health, Soil Testing & Conservation Stewardship Program Workshop was held March 27, 2014 at the First United Methodist Church in Cheyenne, Oklahoma. The workshop and program was attended by producers and agency staff from Roger Mills, Beckham, Custer, and Washita Counties. Information booths from the National Agricultural Statistics Service, Roger Mills Prescribed Burn Association, OSU Extension, Upper Washita Conservation District and Natural Resources Conservation Service were available to visit. A representative from each agency spoke about programs that are available from them. USDA-NRCS Program Liaison, Brandy Pietz-Jones, spoke on the Conservation Stewardship Program (CSP). USDA-NRCS State Soil Scientist, Steve Alspach, and Harry Fritzler, USDA-NRCS Range Management Specialist demonstrated the 'Rain Simulator' on different cropland and rangeland scenarios. Lunch was sponsored by the Oklahoma Tribal Conservation Advisory Council (OTCAC).



Producers received soil health training from Rangeland Specialist, Harry Fritzler

Zone 4 Review

Haskell County - Stigler Field Service Center

The Haskell County Conservation District and the Stigler NRCS office staffs set up and manned a conservation information display booth at the annual Dixon's Farm Supply Customer Appreciation Day event held at their business location in Stigler on April 2nd. The first Wednesday in April each year Dixon's Farm Supply, a local ag business, offers special discounts on ag products, allows various display booths to be set up inside their business store, and provides an excellent lunch to express appreciation for their clientele's patronage. Over 200 attended the event and it provided a great opportunity for conservation outreach and related contacts. Information pertaining to the new Farm Bill Programs as well as Soils Health was provided to those visiting the conservation display booth. Pictured are some of those attending enjoying a steak sandwich meal with all the trimmings.



PITTSBURG COUNTY - McAlester Field Service Center

The McAlester NRCS staff met on-site with representatives from Jones Academy, the Choctaw Nation, and the US Fish & Wildlife Service to gather ideas and advice for a planned Outdoor Classroom at the Jones Academy near Hartshorne. Financial assistance for the project is from the US Fish & Wildlife Service's *Partners for Wildlife Program* with the Choctaw Nation providing construction. Various classroom stations are being planned with some centering around a pond or water body. Those involved at the meeting were Dwayne Sanders, Robert Ray, and Brad Spears from Jones Academy; Tracy Horst, Tracy Hartman, and Melissa Robinson from Choctaw Nation; Jontie Aldrich and Denise Wagner from US Fish & Wildlife Service; and Russ Wright, Acting District Conservationist, and Teresa Wright, Soil Conservation Technician, with NRCS.



Outdoor Classroom at the Jones Academy near Hartshorne

Zone 4 Review cont...

Eastern Oklahoma Ag Trade Show

The Poteau, Sallisaw, Stigler, and Wilburton NRCS offices partnering with the Conservation Districts in LeFlore, Latimer, Haskell and Sequoyah Counties conducted their **8th Annual Eastern Oklahoma Ag Trade Show** at the Leflore County Fairgrounds near Poteau on April 8. The event attracted over 25 vendor booths and 250 attendees. Information was provided pertaining to ag equipment and supplies, financial assistance, farm bill programs and available USDA services. Speakers gave presentations about horticulture and fire ant management as well as poultry topics for both under-graduate and graduate level continuing education credits. Other partners co-sponsoring the event included: Farm Credit, The Kerr Center for Sustainable Agriculture, the Oklahoma Tribal Conservation Advisory Council, OK Farms, OSU Cooperative Extension Service, OK Farm Bureau, Leflore County Cattlemen's Association, and KTCS 99.9.

A few pictures from this year's event ~

